expanded clay, expanded glass, vermiculites, and kieselguhr and their mixtures with 20 to 7 wt% of an aqueous alkali silicate solution where the lightweight aggregate is bonded in a network structure exclusively at the contact sites to obtain its essential properties, wherein the molded body has a dry bulk density and that the dry bulk density lies in the range from 150 to 750 kg/m^3.

Please cancel claim 2.

3. Molded body according to Claim 1 further comprising that the molded body has a compressive strength and that the compressive strength lies in the range from 0.1 to 15 N/mm^2.

Please cancel claim 4

5. Molded body according to claim 1 wherein the aqueous alkali silicate solution is alkali silicates.

6. Process for the production of a molded body according to claim 22 further comprising the steps of:

subjecting the lightweight aggravate and the aqueous alkali silicate solution to a shaping process after mixing and sintering at 400°C to 1000°C over a period from 0.1 h to 5 h.

7. Process according to Claim 6, wherein the molded body has a compressive strength in the range from 0.1 to 15 N/mm^3 and at least one of the dry bulk density and the compressive strength is adjusted as a function of the lightweight aggregate and the process parameters during sintering.

8. Process according to Claim 6 further comprising the step of drying at 50°C to 95°C after shaping and before sintering.

9. Process according to claim 6 wherein the sintering process is conducted at 550 to 850 °C.

10. Process according to claim 6 wherein sintering occurs during a period from 0.1 h to 0.5 h.

11. The molded body according to claim 1, wherein the molded body is used as insulation.

12. The molded body according to claim 1, wherein the molded body is used as construction material.

13. The molded body according to claim 1, wherein the molded body is used as furnace lining.

14. The molded body according to claim 1, wherein the molded body is used as a brick for formation of exhaust installation.

15. The molded body according to claim 1, wherein the molded body is used for technical sound protection in interior rooms.

16. The molded body according to claim 1, wherein the molded body is used for a sound-absorbing segment for fixed passageways of rail vehicles.

17. The molded body according to claim 1, wherein the molded body is used as a fireproofing element.

18. The molded body according to claim 1, wherein the molded body is used as a sound absorber in exhaust lines.

Please add new claims 21 and 22 as follows:

21. Molded body according to claim 1, wherein the lightweight aggregate is cenospheres.

22. A process for the production of a molded body from a lightweight substance formed from a lightweight aggregate and a sintering auxiliary, the process comprising the steps of:

obtaining a sintered product by mixing a lightweight substance of 80 to 93 wt% of a lightweight aggregate selected from the group consisting of perlites, expanded clay, expanded glass, vermiculites, and kieselguhr and their mixtures with 20 to 7 wt% of an aqueous alkali silicate solution where the lightweight aggregate is bonded in a network structure exclusively at the contact sites to obtain its essential properties wherein the molded body has a dry bulk density and that the dry bulk density lies in the range from 150 to 750 kg/m^3.